



Graduate School of
**BUSINESS &
PUBLIC POLICY**

Commissioning Source and USMC Officer Performance

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March 2004



Officer Performance Differences

- GAO (1992) asserts that:
 - “Officer quality does not vary significantly by commissioning program....”
 - “Career progression varies little by production source....”
- Goal of this research is to determine impact of commissioning program on officer performance
- Use USMC data due to variety of commissioning programs and unique training sequence



MCCOAC Data on Commissioning Programs

❖ Program

- Platoon Leaders
Course (PLC).....
- Officer Candidate's
Course (OCC).....
- NROTC.....
- USNA.....
- Enlisted programs
(MECEP, ECP, MCP)...

❖ 2001 Accession Pct.

- 23.5%
- 36.0%
- 13.7%
- 11.1%
- 15.3%



Unique Features of USMC Programs

- All USMC entrants (except USNA grads) must complete OCS, which performs both a training and a pre-commissioning screening function
- The Basic School (TBS) is required of all commissioned officers
- Officers complete specialty (MOS) training after TBS



Unique Features of USMC Programs...

- Heavier reliance on prior enlisted programs (15% in 2001)
- Majority of accessions from OCS-type (non-scholarship) programs
 - PLC is unique program
 - Program admits college freshmen, sophomores, or juniors
 - Candidates complete summer training at OCS but do not take ROTC courses
 - OCC is more like a 'normal' OCS-style program
 - Candidates are college graduates



- *'Marine Corps Commissioned Officer Accession Career File' (MCCOAC)*
 - Longitudinal; tracks officer year groups 1980-2000 from TBS until separation or 2001
 - Includes promotion and career events (jobs, duty stations)
- We merge individual fitness report data through 2000



Officer Performance Metrics

- ✓ TBS Overall Class Rank
- ✓ Retention
- ✓ Promotion to O-4
- ✓ Promotion to O-5
- ✓ 'Performance Index' (based on fitness report scores)



Methodology

- Specify human capital-based performance models
- Performance is determined by cognitive and affective skills and by specific and general human capital.
- Estimate as single-stage probit models



Indicator 1: TBS **Performance**

- Indicator = TBS Overall Class Rank (in percentile)
- Class Rank based on three component scores:
 - Leadership (receives highest weight)
 - Military
 - Academic
- TBS provides Marine officer training; performance at TBS establishes foundation for career success



Findings on TBS Performance

- TBS performance is lower for PLC/OCC (compared to NROTC/USNA)
- But, GCT scores are lower for PLC/OCC grads and, when we control for GCT score, TBS performance differences by source shrink
- Suggests that differences at TBS between scholarship (USNA/NROTC) and non-scholarship programs (OCC/PLC) attributable to the commissioning program may be small
 - Differences may be due to selectivity
 - Note, too, GCT has strong independent effect on TBS performance



Indicator 2: Retention to 10 YCS

FINDINGS

- MECEP (enlisted program) has highest retention rates (+15 pts higher than USNA)
- PLC and OCC lowest retention rates (-4 to -10 pts vs. USNA)
- No differences between scholarship programs (NROTC vs. USNA)



Indicator 3: Promotion to O-4

FINDINGS:

- Promotion differences between sources are small, but significant
- NROTC and MECEP less likely to promote
- PLC and OCC more likely to promote
 - Only indicator where PLC/OCC graduates display superior performance



Indicator 4: Promotion to O-5

FINDINGS:

- Promotion differences by commissioning program narrow even further at O-5 board
- However, PLC and OCC graduates less likely to promote (7 to 8 pt difference)



'Yield rates' by Source (vs. USNA)

	<i>Stay to O-4</i>	<i>Promote O-4</i>	<i>Stay and Promote O-5</i>
<i>NROTC</i>	--	-3	--
<i>PLC</i>	-4	+3	-7
<i>OCC</i>	-10	+5	-8
<i>MECEP</i>	+15	-7	--



- Yield rates to O-4 slightly lower for most commissioning programs (vs. USNA)
- Yield rates for PLC and OCC to O-5 significantly lower (vs. USNA)



What about within-grade performance differences?

- Construct Performance Index (PI) based on fitness report scores
- Performance evaluation system changed in 1998. Thus, we construct two Indexes:
 - PI for 1980-1998 (cohort data)
 - PI for 1998-2001 (cross sectional data)



Indicator 5: Performance Index (old fit reps)

- INDICATOR = Sum of scores on 21 graded items; calculate average score on all reports for given grade
- FINDINGS:
 - Effects of commissioning program significant, but small
 - NROTC, PLC, and OCC have lower PI during junior grades
 - Enlisted program PI results are mixed



Indicator 6: Performance Index (new fit reps)

- INDICATOR = Sum of scores on 14 graded items; calculate average score on all reports for given grade
- FINDINGS:
 - NROTC and USNA have similar performance
 - PLC and OCC have lower PI through O-4 (max difference is -8 pts)
 - Enlisted program PI results are mixed



Performance Evaluation System

- System changed in 1998 to combat grade inflation on fitreps
- Grade inflation is reduced: mean of old fit reps highly inflated ($\mu=97$) whereas mean of new fit reps more normally distributed ($\mu=50$)
- However, fit rep scores had already begun to increase between 1999 and 2001



Role of Selection Bias

- Performance indicators in later career may be biased by stay-leave decisions.
- Could bias coefficients in promotion and higher-grade PI models
- To account for selection bias, we estimate bivariate probit models of survival and performance
- Find: (a) correlation between retention and performance is negative; and (b) coefficients in simple probits are downward biased (biased toward zero)



Conclusions

- Scholarship participants (USNA and NROTC) have best 'yield rates'
- USNA and NROTC grads have superior within-grade performance
- It appears that efforts by USMC to expand its share of USNA graduates (from 16% to 20% of each graduating class) may be justified



Conclusions

- PLC and OCC have lower yield rates and lower within-grade performance; but they are lower-cost programs
- MECEP graduates have higher retention and higher within-grade performance
- Expansion of MECEP program appears to be cost-effective:
 - Candidates have prior enlisted service and pay own college costs
- Caveat: full analysis of program cost is needed to evaluate cost-effectiveness of programs